WHAT IS CLAIMED IS:

1. A fluidic device for the analysis of cells, the device comprising:

a dielectrophoretic field-flow fractionation separator configured to discriminate cells by balancing a dielectrophoretic force with a gravitational force to displace the cells to positions within a velocity profile in the separator; and

a multi-segment electrode array isolator coupled to the separator and configured to trap at least a portion of the cells emerging from the separator.

2. The fluidic device of claim 1, further comprising a dielectrophoretic prefilter coupled to the separator, the prefilter comprising one or more trapping electrodes configured to trap at least a portion of the cells with a dielectrophoretic force.

3. The fluidic device of claim 1, wherein the separator further comprises a magnet configured to displace with a matnetophoretic force the cells to positions within the velocity profile in the separator.

4. The fluidic device of claim 3, wherein the magnet comprises SnCo or NdFeB.

5. The fluidic device of claim 1, further comprising a programmable fluidic processor coupled to the electrode array isolator.

6. A fluidic device for the analysis of cells, the device comprising:

a dielectrophoretic prefilter comprising one or more trapping electrodes configured to trap at least a portion of the cells with a dielectrophoretic force;

a dielectrophoretic field-flow fractionation separator coupled to the prefilter and configured to discriminate cells by balancing a dielectrophoretic force with a gravitational force to displace the cells to positions within a velocity profile in the separator; and

two or more spiral electrode segments coupled to the separator and configured to trap at least a portion of the cells as a function of the cells' time of emergence from the separator.

7. The fluidic device of claim 6, wherein the two or more spiral electrode segments each comprise a plurality of electrode elements, wherein each of the plurality of electrode elements are configured to be energized by a signal of a single frequency, but wherein the phase of the signal is different for each of the plurality of electrode elements.

8. The fluidic device of claim 7, further comprising four electrode elements, and wherein the phases of the signal are 0°, 90°, 180°, 270°.

9. The fluidic device of claim 6, further comprising a reagent port configured to allow for the injection of reagents onto the cells trapped on the spiral electrode segments.

10. The fluidic device of claim 6, wherein the separator further comprises a magnet configured to displace with a matnetophoretic force the cells to positions within a velocity profile in the separator.

11. The fluidic device of claim 10, further comprising a programmable fluidic processor coupled to the two or more spiral electrode segments.

12. A fluidic device for the analysis of cells, the device comprising:

a dielectrophoretic field-flow fractionation separator configured to discriminate cells by balancing a dielectrophoretic force with a gravitational force to displace the cells to positions within a velocity profile in the separator;

a multi-segment electrode array isolator coupled to the separator and configured to trap at least a portion of the cells emerging from the separator; and

a programmable fluidic processor coupled to the electrode array isolator.

13. The fluidic device of claim 12, further comprising a dielectrophoretic prefilter coupled to the separator, the prefilter comprising one or more trapping electrodes configured to trap at least a portion of the cells with a dielectrophoretic force.

14. The fluidic device of claim 12, wherein the separator further comprises a magnet configured to displace with a matnetophoretic force the cells to positions within a velocity profile in the separator.

15. A method for cell isolation and analysis, comprising:

introducing cells into a dielectrophoretic field-flow fractionation separator;

discriminating the cells in the separator, the discriminating comprising balancing a dielectrophoretic force with a gravitational force to displace the cells to positions within a velocity profile in the separator; and

trapping at least a portion of the cells emerging from the separator with a multi-segment electrode array isolator coupled to the separator.

16. The method of claim 15 wherein at least a portion of the cells are initially coupled to the surface of a carrier bead.

17. The method of claim 15 wherein the discriminating the cells further comprises using a magnetophoretic force to displace the cells to positions within a velocity profile in the separator.

18. The method of claim 17, wherein the cells are incubated with magnetically labeled antibodies.

19. The method of claim 15, further comprising lysing the cells trapped by the multu-segment electrode array isolator.

20. The method of claim 19 wherein the lysing comprises using AC electrical fields.

21. The method of claim 15, further comprising introducing cells into a dielectrophoretic prefilter comprising one or more trapping electrodes configured to trap at least a portion of the cells.

22. The method of claim 15, further comprising manipulating the cells using a programmable fluidic processor coupled to the multi-segment electrode array isolator.

23. A method for cell isolation and analysis, comprising:

introducing cells into a dielectrophoretic prefilter comprising one or more trapping electrodes configured to trap at least a portion of the cells with a dielectrophoretic force;

directing the cells trapped from the prefilter into a dielectrophoretic field-flow fractionation separator coupled to the prefilter;

discriminating the cells, the discriminating comprising balancing a dielectrophoretic force with a gravitational force to displace the cells to positions within a velocity profile in the separator; and

trapping at least a portion of the cells as a function of the cells' time of emergence from the separator with two or more spiral electrode segments coupled to the separator.

24. The method of claim 23 wherein the discriminating the cells further comprises using a magnetophoretic force to displace the cells to positions within a velocity profile in the separator.

25. The method of claim 24, wherein the cells are incubated with magnetically labeled antibodies.

26. The method of claim 23, wherein a plurality of analysis beads are mixed with the cells after the cells emerge from the separator.

27. The method of claim 23, further comprising concentrating the cells on the two or more spiral electrode segments, the concentrating comprising energizing the two or more electrode segments with a multi-phase field.

28. The method of claim 27, wherein the multi-phase field comprises four phases, and comprises a frequency between 10 KHz to 200 kHz.

29. The method of claim 23, further comprising manipulating the cells with a programmable fluidic processor coupled to the two or more spiral electrode segments.

30. A method for cell isolation and analysis, comprising:

introducing cells into a dielectrophoretic field-flow fractionation separator;

discriminating the cells in the separator, the discriminating comprising balancing a dielectrophoretic force with a gravitational force to displace the cells to positions within a velocity profile in the separator;

trapping at least a portion of the cells emerging from the separator with a multi-segment electrode array isolator coupled to the separator;

manipulating the cells with a programmable fluidic processor coupled to the electode array isolator.

31. The method of claim 30 wherein the discriminating the cells further comprises using a magnetophoretic force to displace the cells to positions within a velocity profile in the separator.

32. The method of claim 30, further comprising introducing cells into a dielectrophoretic prefilter comprising one or more trapping electrodes configured to trap at least a portion of the cells.